

CALENDAR SYSTEM FUNDAMENTALS

Reckoning and Measuring Time

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http://www.advertisingbydesign.com/TheWord/articles/calendar_systems.html

[CLICK HERE](#) for an enlarged visual graphic of the earth rotation around the sun.

There are many biblical Holy day observers who argue YHWH did not record a calendar system within scripture. Many such people believe they must follow the Rabbinical/Pharisaical Judaic calendar system known as the Hillel calendar because of this supposition. They base their supposed doctrinal belief upon [Romans 3:2](#) which paraphrased reads: *the Jews were committed the oracles of God*. These Holy day observers sincerely think the oracles include the Hillel calendar. This understanding is ignorantly erroneous. [Acts 7:37-38](#) paraphrased: *Moses received the oracles from the Messenger on Mt. Sinai*. Oracles mean the utterance from God. According to Strong's Exhaustive Concordance, the Greek word translated into English as ORACLE/S in both [Romans 3:2](#) and [Acts 7:37-38](#) is "logō-ee-on" #3051 meaning: an utterance (of God). The Greek word "logō-ee-on" was derived from the Greek word "log'-ee-os" (#3052) meaning: orator. An orator is the one who does the speaking (orating). Moses received the oracles, wrote them in a book, and read it to the people ([Ex 24:7](#), [Deut 31:11](#), [Joshua 8:33](#)). These writings are known as the first five books of the bible and the book of the law. The book of the law does not include the Judaic calendar system.

The Judaic calendar system was created by the Pharisee sect of Jews and is attributed mostly to Hillel II within the Hillel dynasty in around 358/59 C.E. Consequently, the Judaic calendar system is known as the Hillel calendar. This calendar system was born during the captivity of the house of Judah in Babylon and continued in development before it became affixed in the 10th century. It is part of the Judaic Talmudic (oral) law, not inspired scripture.

Since the Judaic calendar system is erroneous, what calendar system should Leviticus 23 Holy day observers use? How are the times of the Holy days reckoned? The answer: by understanding YHWH's natural calendar system He instituted which was recorded by Moses. In our modern age, most everyone around the world uses a pre-calculated calendar system. Because of this, most everyone has the mind-set that the Holy day must be reckoned according to a pre-calculated calendar system. This thought is erroneous, and it is based upon ignorance. In order to fully understand YHWH's calendar system, one must learn calendar fundamentals and some history about calendars.

BELIEF BASED ON IGNORANCE

In this modern age, most of humanity operate within a calendar system that consists of units or divisions and subdivisions which have strictly limited durations such as: years, months, days, hours, minutes and seconds. Therefore, since this is the only frame of reference for determining time for most people in this modern age, many biblical Holy day observers assume YHWH's Holy Days listed in [Leviticus 23](#) should be contained within a modern day calendar system of calculations. This is where their error exists. YHWH's Holy days were not

setup to recur within a modern calendar system. Many view YHWH's calendar system contained within scripture as incomplete or primitive; although, it isn't either. YHWH created the sun, moon and stars for light, to determine days, months, and years. And, these celestial bodies were also meant for His signs and His appointed days during a yearly span. [Genesis 1:14](#) reads; "*And Elohim said, 'Let lights come to be in the expanse of the heavens to separate the day from the night, and let them be for signs and appointed times, and for days and years.'*"

In [Genesis 1:14](#), the King James renders the words 'appointed times' as 'seasons'. According to Strong's Concordance the word 'seasons' is #4150, and is defined as: prop an appointment, i.e., a fixed time or season; especially a festival; conventionally a year: by implication, an assembly (as convened for a definite purpose). This same word, #4150 rendered 'seasons' in [Genesis 1:14](#) is also found in [Leviticus 23:4](#). But, the King James Bible version renders #4150 in [Leviticus 23:4](#) as 'Feasts'. The words, seasons and feasts, come from the same Hebrew word, 'mowed/moed'.

In [Leviticus 23](#) and [Deuteronomy 16](#), YHWH spoke through Moses who proclaimed His appointed Feasts and Set-apart days and when they are to be observed. Instruction was also given how to determine a year and how to determine His appointments within a year. The children of Israel were to watch the natural phenomena: plant growth and count the number of new moons. Our modern age has labeled watching the natural phenomena as a primitive calendar system.

WHAT IS A PRIMITIVE CALENDAR?

A primitive calendar can be firmly relied upon. Certain natural phenomena constantly recurs. As examples, the sun, moon, spring, summer, fall, and winter constantly recur in the same order. Indication examples of this phenomena are sprouting leaves, ripening of certain fruits, the falling of leaves, the increase and decrease of day light hours, and the like. By referencing such invariable ceaseless phenomena, time can be indicated. These time indications are not durational like the unit of any system of time-reckoning, but indefinite. Consequently, time indications are often unequal and indeterminate and therefore cannot be numerically grouped together. For example: one moon cycle (new moon to the next) may be 29 days, but the consecutive moon cycle might be 30 days. The only way of indicating a definite time period such as a certain day, month, or year is by referring to a certain event or natural phenomenon connected with it. The month in which the leaves fall or the man who has seen seventy-five seasonal cycles is seventy-five years old.

WHAT IS A MODERN CALENDAR?

The modern world devised an abstract system of time-reckoning that consists of units or divisions and subdivisions which have strictly limited durations such as: years, months, days, hours, minutes and seconds. The basic calendar units were derived from the movements of the earth, the moon and the sun, respectively. 1. "*To define a certain point or space in the lapse of time, these units are simply numbered. They serve not only for the indication and reckoning of time but also for its measurement.*" Idealistically, these units of the same order ought to have the same length, but natural phenomena prevents this.

WHAT MOST PEOPLE DON'T KNOW

Most people are completely unaware that before what is considered to be

"modern time" or the "common era", the world did not calculate time by using units or divisions and subdivisions which have strictly limited durations such as: years, months, days, hours, minutes and seconds. The entire ancient world watched for the new moons and the changing natural phenomenon. For one example of this: the ancient Egyptians calculated months by the observation of the new moon and the rise of the Nile River each year on which the agricultural welfare of the country depended. Civil calendars for each kingdom and national groups of people varied. There was no one-set calendar system for the world to which history was recorded and based. The modern division and calculation of time was influenced upon the world by the Greeks.

To stay in sync with the natural phenomena, the ancient world intercalated a month when necessary. Most people, mainly Hillel calendar followers, are completely unaware that intercalation was not developed by the Jews, namely Hillel, but was anciently and historically used within a primitive calendar. The word "intercalate" simply means to add a day or month to a year when determining a year's end and beginning. The ending of one year, and the beginning of another was primarily determined by spring - the rebirth of the plant and agricultural life.

DEFINING AND CALCULATING TIME

SCIENTIFIC FUNDAMENTALS OF RECENT HISTORY

The elliptical rotation by the earth around the sun is 365 days, 48 minutes, and 46 seconds and is called a solar year. Moon periods of revolution around the earth vary in length of time. The average time between successive new or full moons equal to 29 days, 12 hours, 44 minutes, and 3-1/3 seconds. A solar year exceeds a lunar year (12 moon phases/periods) by approximately 11-1/4 days.

UNDERSTANDING TERMS

- **Intercalate:** To add a day or month to a calendar so the calendar year corresponds to the natural solar year; remaining in sync with seasons.
- **Conjunction:** 1) The act of joining or being joined. 2) Simultaneous occurrence 3) [Astronomical definition] The position of two celestial bodies on the celestial sphere when they have the same celestial longitude. The point in time at which the moon is directly between the earth and the sun (but not on the same latitude) and thus invisible.
- **Molad:** A Hebrew word meaning: The point in time at which the moon is directly between the earth and the sun (but not on the same latitude) and thus invisible. Both the Britannica and Judaica Encyclopedias define the word molad as being equal to the meaning of the English word conjunction in terms of the position of the earth, moon, and sun. The word MOLAD was derived from a primitive Hebrew root word YALAD (Strong's #3205) meaning BIRTH.

A **Soli-lunar Calendar** is based on: 1) one complete earth rotation around the sun constituting a solar year 2) one complete moon cycle around the earth constituting a lunar month 3) each month begins and ends with the beginning and ending of the moon cycle.

A **Solar Calendar** is based on: 1) Each month does not begin and end with the beginning and ending of a moon cycle. Months are abstract and are merely mathematical calculations. 2) One complete earth rotation around the sun

constitutes a solar year [Note: our modern calendar system is solar based.]

Vernal Equinox



Because the Earth tilts back and forth on its axis relative to the Sun, the Celestial Equator (blue in this diagram) and the Ecliptic (red) are usually at an angle to one another. Although, twice a year, the Equator and the Ecliptic line-up with one another. This event is termed as an 'Equinox'. Spring begins when the Vernal Equinox occurs.

For further reading, visit: <http://www.glyphweb.com/esky/default.htm>

HISTORICAL SNIPPETS

Greeks

The early Greeks developed a rough soli-lunar calendar, differing from all modern European systems of its day. 2. "*In theory, every year began when the sun was in a certain position (solstice or equinox) and every month began with the new moon. But, as the solar year (solstice to solstice or equinox to equinox) is not even approximately divisible by the lunar month, the result was that some system of adjustment was necessary.*" After eight consecutive solar years (eight earth rotations around the sun), there was an accumulative difference of 90 days, which is about three lunar months. The Greeks simply inserted, at different times, three lunar months within eight solar year durations attempting to remain in sync with the seasons and the moon phases. 3. "*An important attempt at reform was made by the astronomer Meton of Athens. By his system, the years, commencing from the end of June, 432 B.C. of our reckoning, were grouped into 'great years' of 19 each, with 7 intercalary months. This gave, on average, a month of 29 days, 12 hr., 45 min., 57 sec., - less than 2 minutes to long. Callippus of Cyzicus later combined four Metonic cycles into one, and finally Hipparchus of Nicaea combined four Callippian periods into one cycle of 304 years, by which a very high degree of accuracy was obtainable.*"

Romans

The Romans eventually conquered the Greeks but did not adopt their calendar system. The Roman Republic calendar was similar to that of the Greek type, but less sophisticated. The working of the calendar was in the hands of the Roman pontifices (then referred to as priests, now referred to as popes) **who every month used to watch for the visible new moon(!)**. And, when it was seen, proclaimed from the capitol. 4. "*Owing to the clumsiness of the pontifices, and still more to political maneuvers, by which intercalation was made or omitted recklessly to affect a magistrate's year of office, the calendar got into hopeless confusion by the end of the republic, and Julius Caesar undertook its reformation.*" By 45-46 B.C. seasons no longer occurred during the same calendar periods as they had near the time of Rome's founding. His changes resulted in converting the Roman calendar from lunar-solar to solar. Months became abstract and no longer true; adjoining with the beginning of a visible new moon. The Julian Calendar's intercalation rule called for an extra day in February every four years without exception. This provided for almost eight more intercalary days than necessary in each thousand years. As a result, the calendar continued to become further out of phase with seasons as time passed.

By the mid sixteenth century, actual moon phases were occurring four days prior to those in ecclesiastical tables, so Easter was sometimes being celebrated prior to the vernal equinox rather than following it as had been specified by the A.D. 325 Council of Nicaea. The Julius calendar was in affect until the Gregorian reform in 1582 and has continued into our modern day. (Gregory XIII was pope from 1572 to 1585.) The Gregorian calendar was founded on two erroneous suppositions, namely, that the year contains 365-1/2 days and that 235 lunations are exactly equal to nineteen solar years. 5. *However, Pope Gregory's reform was an improvement over the old Julian calendar system. However, if we continue to follow the Gregorian calendar specifications set in 1582, our calendar could get at least one day further out of phase with solar years every 2500 years or so.* 6. *One way to keep the calendar more closely coordinated with seasons over the long term is to use a method that is based on observation."*

Judaic

The Babylonian calendar imposed by the kings of the first dynasty of Babylon (2000 B.C.) and onward was adopted and used by the Jews on their return from exile to Jerusalem. The Babylonian calendar was both solar and lunar (solilunar). It contained generally 12 lunar months within a solar year cycle. Each month began with the sighting of the first visible crescent new moon and in general, each month length was 30 days. In order to prevent too serious a derangement of the seasons owing to the discrepancy between 12 lunar months and the solar year, an extra month was intercalated creating a year containing 13 months. The objective was to insure the first month (Nisan) should not fall over a month later than the spring equinox, and not more than a month before it.

The Talmud (Yerushalmi, Rosh ha-Shanah i. 1) states the Jews adopted the names of the months at the time of the Babylonian exile. Biblical record references the months mostly by number and by the agricultural state, however it also does contain a record of four names before the exile: Abib (1), Ziv (2), Ethanim (7), and Bul (8).

Until quite recent history, the influence of the crops on the fixation of the yearly calendar was powerful. **Intercalation was decided upon in individual years according to the state of the agricultural crops and in connection with the first visible crescent new moon.** During the Second Temple period, it appears from the a.Mishnah (R. H. i. 7) the priests had a court to which witnesses came and reported the sighting of the visible crescent new moon to the Sanhedrin. This function ultimately was later taken over by the Patriarch due to the dispersion after the fall of the second temple. Gradually, observation gave place to calculation because Palestine remained a religious centre. The Jews of Mesopotamia tried in vain to establish their own calendar due to the different geographic location. If different parts had celebrated feasts on different days, confusion would have ensued. According to most Jewish sects (except for the Qaraites), uniformity was more important than observation. The Qaraites vehemently opposed the Rabbinates calculated calendar. Their opposition was victorious over the Great Rabbinates Sa'adya (892-942) whose theory was that calculation preceded observation which they could easily disprove. By the end of the 15th century, necessity forced the Qaraites to adopt calculation over observation. The present Jewish calendar is a result of a long development and is not of great antiquity.

The Jewish calendar is based on an erroneous 19 solar year time cycle as is our present Gregorian calendar system. **The bases of the present Jewish calendar**

is traditionally believed to have been introduced by Hillel II in around 358/59 C.E. (Current Era). This time period is clearly after Messiah accended to heaven following His physical life.

WHY THE HILLEL CALENDAR IS UNACCEPTABLE

First reason:

The Hillel calendar system is extra-biblical. It is written within the oral law of the Pharisaical Jews. The oral law is composed of several compiled books by the Pharisaical Jews containing their own traditions that transgress biblical devine law (examples: [Matthew 5:2-3](#), [15:1-9](#), [Colossians 2:8](#)). The oracles [words and commands from YHWH] were received by Moses on Mount Sinai ([Acts 7:38](#)). Moses wrote all the law until it was finished [complete] ([Deut 31:24](#)). In [Deuteronomy 4:2 and 12:32](#), YHWH commanded: we do not add or subtract from His laws. The extra-biblical books are additional laws imposed by the Pharisaical Jews. [Matthew 15:12-14](#) reads, they are blind leaders and if you follow them, you both will fall into the ditch.

Second reason:

Biblically, the festivals are connected with and follow the spring and fall crop harvests. The harvests and the Holy festival days are inseparable. YHWH's set times within [Leviticus 23](#) forshadow and prophesy the three resurrections: Messiah - the first of the first fruits, the saints - the first fruits, and the rest of mandkind - the fall fruits. Mankind is the crop YHWH is harvesting.

The modern Hillel calendar does not remain in sync every year with the state of agricultural crops grown in Jerusalem. There have been past years when the barley grain was not developed within the head of the stock when the Hillel calendar followers celebrated Passover and the days of unleavened bread, thus throwing the remaining subsequent Holy days out of sync also. This situation was not acceptable during temple times since the Israelites were commanded to bring a grain offering, the first of the first fruits (the barley) to the priests for a wave offering during the feast of unleavened bread. They never brought unripened barley! One cannot celebrate a festival harvest without first harvesting a crop that has ripened! Some Hillel followers defend the Hillel calendar by saying, "*The saints are not bound by the letter of the law, but by the Spirit of the law. Therefore, YHWH's Holy days do not have to be in sync with the agricultural crop harvests.*" This is completely erroneous thinking because it does not follow YHWH's devine law. There cannot be a Spirit of the law if there is no letter of the law as a foundation.

[Deuteronomy 16:1](#) commands to watch for the month of Abib. Abib is in direct reference to the growth state of the agricultural crops. And, [Deuteronomy 16:9-10](#) commands to count seven weeks from the time the sickle is put to the grain when determining the observance of the Feast of Weeks - the spring wheat harvest Holy day. And, [Deuteronomy 16:13](#) commands the performance of the Festival of Booths after the ingathering from the threshing floor and winepress. The growth state of the agricultural crops is inseparable from YHWH's appointed times for observance.

Hillel's mathematical calculations have failed to ultimately determine the suns position and the state of crops within projected years. Only the sun's position in its annual path can ultimately determine the beginning of a new year, and determine the state of crops. Again, [Deuteronomy 16:1](#) commands to watch for the month of Abib. This is YHWH's simple calendar system: watching His natural

phenomena. It is not as primitive as men have supposed. They have never been able to contain the celestial body movements within mathematical calculations and they have never been able to control them. YHWH's calendar system is scientifically advanced and is based on indefinite time indications unlike mans many calendar systems which are durational. Could it be: YHWH designed His calendar system to be indefinite because He is indefinite?

QUOTE REFERENCES

- 1.quote from pg 572 Encyclopedia Britannica under Calendar
- 2-3.quote from pg 578 Encyclopedia Britannica under Calendar
- 4.quote from pg 579 Encyclopedia Britannica under Calendar
- 5-6.quote from <http://www.greenheart.com/billh/gregory.html> under Gregorian Calendar

DEFINITION REFERENCES

- a.The Mishnah is the first section of the Talmud (oral law) consisting of a collection of early oral interpretations of scriptures as compiled about 200 A.D. Mishnah is a Hebrew word meaning: repetition instruction.

Bibliography references:

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